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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,818	07/07/2004	Mark Neuschuetz	MERCK-2894	6975
23599	7590	06/16/2005	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			GREEN, ANTHONY J	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,818

Applicant(s)

NEUSCHUETZ, MARK

Examiner

Anthony J. Green

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/07/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendment

1. The preliminary amendment submitted on 15 March 2005 has been entered.
Currently claims 1-12 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to "Use of" which is not a statutory category of invention. The claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is confusing as written as the preamble states that the polymer composite is suitable as matrix for PCM's however later in the claims applicant recites that the PCM's are embedded in a silica matrix. Accordingly it is unclear as to just what applicant is intending to claim.

In claim 6 the phrase "good thermal conductivity" is vague and indefinite as "good" is a relative term. The use of the phrase "in particular a metal powder" renders the claim vague and indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention and the scope of the claim is unascertainable. See MPEP § 2173.05(d).

Claim 7 is confusing as written as the claim first recites "essentially consisting of" and then applicant recites "which contains". Also it is unclear as to where the polymer composite is contained. The phrase "the surface area" lacks proper antecedent basis.

In claim 8 the use of the phrase "in particular cooling fins" renders the claim vague and indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention and the scope of the claim is unascertainable. See MPEP § 2173.05(d).

Claim 10 is confusing as written as it is unclear as to how the polymer composites can contain a computer. Also claim 1 is not drawn to a computer containing polymer composite.

Claims 11-12 provide for the use of polymer composites, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT International Application No. WO 00/61360.

The reference teaches, in the claims, and on page 4, a cellular foam product comprising a phase change material that is mixed, absorbed or adsorbed with a silica.

The instant claims are met by the reference as the reference teaches a composition that encompasses that which is instantly claimed.

7. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldwin (US Patent No. 5,601,744).

The reference teaches, in column 2, lines 33+, and in claims 7+, a container having a microwave receptive material which includes silica which is impregnated with

wax. The silica may be supported in a high-density polyethylene structure. Carbon black may be present as a microwave receptive material.

The instant claims are met by the reference as the reference teaches a composition that encompasses that which is instantly claimed. It is the position of the examiner that the carbon black meets applicants claimed auxiliary.

8. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Salyer (US Patent No. 5,755,216).

The reference teaches, in the claims, and in column 7, lines 57+, the formation of a building product having a molded high density polyethylene/ethylene vinyl acetate plug having a matrix structure and having a phase change material contained within by melt mixing said phase change material and silica particles (See especially claim 22).

The instant claims are met by the reference as the reference teaches a composition that encompasses that which is instantly claimed.

9. Claims 1-2, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Salyer et al (US Patent No. 5,565,132).

The reference teaches, in the claims, a thermal energy storage material comprising a solidified melt mixture of polyolefin resin, silica particles and a phase change material. The material may further contain a microwave absorbing additive.

The instant claims are met by the reference as the reference teaches a composition that encompasses that which is instantly claimed. It is the position of the

examiner that the microwave absorbing additive meets applicants claimed auxiliary. As for claim 7 since the composition is molded and shaped to fit into the space between the walls of a dual walled food or beverage container it is believed that this limitation is met.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer (US Patent No. 5,755,216).

The reference was discussed above. Further the reference teaches that hydrophobic silica may be used (column 6, lines 32+) and further flame retardants may be added (column 7, lines 29+).

The instant claims are obvious over the reference as the reference suggests that hydrophobic silica may be used thus rendering obvious claim 3 and that flame retardants may be added thus rendering obvious claim 5.

12. Claims 1-5, 7, and 10-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer (US Patent No. 5,477,917)

The reference teaches, in the abstract, the examples and the claims, a free flowing conformable powder-like mix of silica particles and a phase change material.

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The mix can be used in applications for heat sensitive items such as aircraft flight recorders etc. According to column 6, lines 1+, antioxidants may be added into the mix. Also column 6, lines 16+ recite that the PCM/silica composites can be surrounded with thermal insulation materials such as polyurethane or polystyrene foam. According to column 5, lines 2+, the silica may be rendered hydrophobic.

The instant claims are rendered obvious over the reference. The reference suggests that the PCM/silica composite may be surrounded with thermal insulation materials such as polyurethane or polystyrene foam and thus instant claims 1 and 4 are rendered obvious. As for claim 2 the reference teaches that the PCM may be alkyl hydrocarbons which would render obvious the use of paraffins. Claim 3 is suggested by the reference in column 5, lines 2+. Claim 5 is suggested by the reference as it suggests the addition of an antioxidant. Claims 7 and 10-11 are rendered obvious as the reference suggests that the composite may be used for flight recorders which would suggest its use in electronic devices such as a computer.

Specification

13. The abstract of the disclosure is objected to because it is not on a separate sheet free of extraneous material. Correction is required. See MPEP § 608.01(b).

14. The disclosure is objected to because of the following informalities: There is no "Brief Description of the Drawings" found in the specification.

Appropriate correction is required.

Allowable Subject Matter

15. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and provided that all 112 rejections are overcome.

16. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach and/or fairly suggest these claimed limitations.

Information Disclosure Statement

17. The references designated as "X" on the International Search Report and cited by applicant on the IDS and all of the US references have been considered.

References designated 007, 008 and 009 were not considered as no copies were provided. The copies are necessary as they are not US patent documents and they are unavailable to the examiner.

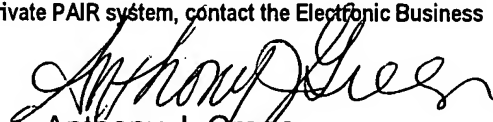
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony J. Green
Primary Examiner
Art Unit 1755

ajg
June 10, 2005